MEDIUM TERM OUTLOOK FOR CANADIAN AGRICULTURE 2018

INTERNATIONAL AND DOMESTIC MARKETS

Agriculture and Agri-Food Canada
Agriculture et Agroalimentaire Canada
Canada

Medium Term Outlook for Canadian Agriculture 2018 - International and Domestic Markets

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What is the Medium Term Outlook?

The Medium Term Outlook (MTO) provides a perspective on agricultural markets over the period 2017 to 2027. Its projections are not a forecast of specific market conditions, but rather a plausible future of the domestic and international agriculture and agri-food markets, with the major drivers identified. It is meant to serve as a benchmark for discussion and a starting point for scenario analyses.

It uses information available as of the Fall of 2017, including the most recent OECD-FAO Agricultural Outlook 2017-2026, and assumes that policies going forward remain unchanged. The MTO incorporates the implementation of the Canada-European Union Comprehensive Economic and Trade agreement (CETA), but does not include additional potential outcomes of ongoing trade negotiations. It also assumes no unusual weather conditions, no significant invasive species, crop or animal disease outbreaks, as well as steady incremental technical progress rather than the introduction of transformative technologies.

The baseline is used to perform analyses whereby the effects of alternate policy, weather, or market conditions can be compared.

The main purpose in developing this baseline is to be able to perform analyses whereby the effects of alternate policy, weather, or market conditions can be compared. It can also be used to identify the key drivers of change over the projection period.

The MTO focuses on supply and disposition for major crops, livestock, milk and dairy products, animal feed, and cereal and oilseed processing industries, including biofuels. These together cover approximately 70 per cent of the value of shipments of the Canadian agriculture and agri-food sector. While the projected value of exports and imports covers the entire sector, the precision of estimates may, nevertheless, be lower for subsectors such as horticulture and maple products. While the MTO's projections are an extrapolation of what could occur based on a set of assumptions, the actual state of the sector during the projection period would likely differ from the baseline, particularly as we go further into the future, as weather, policies, macroeconomic conditions, and technology would likely change.

These projections tend to be conservative in nature since they are based on current policies in place which means that no future policy changes are included unless officially announced with a known implementation date. For example, since the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) has not been ratified by all member country legislative bodies, the impact is not included in the MTO.

The MTO is updated annually to take into account new information and data.

Executive Summary: Current Status of the Agricultural Sector and Future Trends

The MTO projects continued growth for the Canadian agricultural sector between 2017 and 2027, although these gains may be more modest than in the previous decade, and will vary by commodity. Macroeconomic drivers, including economic growth in developing economies that stimulates demand for farm products and a relatively low Canadian dollar, would provide opportunities for increased exports.

The crop sector, particularly oilseeds, is projected to see increased production and exports. However, slower growth in livestock feed requirements in emerging economies means that demand is likely not to grow as quickly as projected in the past. This, and the levelling off in biofuel production, is estimated to restrain increases in global grain prices. Although total area planted with oilseeds is projected to grow only marginally, the use of new biotech varieties means that there are still projected to be robust production increases in the coming decade through yield gains. Plantings of wheat and barley are projected to stabilize, because of relatively favourable prices and as more commercial opportunities for wheat become available.

North American cattle and hog prices have declined significantly after peaking in 2014, and are projected to see more stable ranges going forward. The cattle herd is projected to expand moderately as Canadian producers hold back heifers for breeding in response to relatively low feed prices. The hog sector should follow a similar dynamic. In both cases, this expansion is projected to support a small increase in marketings at the same time that animals will be fed to heavier weights.

The world's population will be a key driver of demand for many farm and agri-food products. Between 2017 and 2027, it is projected to grow by 1 per cent per year, adding 900 million people by 2027.

For dairy, poultry and egg sectors, which are governed by supply management policies, most of the growth would come from higher domestic consumption. The growth in dairy production of the last few years driven by strong butterfat demand is projected to continue over the medium term but at a slower pace. Poultry and egg production are projected to grow modestly, reflecting increases in population and per-capita consumption.

After reaching a peak in 2015 because of adverse weather in the U.S and the appreciation of the Canadian dollar, food price inflation in Canada was very low in 2017 as indicated by an increase of only 0.1 per cent of the Consumer Price Index (CPI) for food. Over the medium term, food prices should increase to the general inflation rate at around 2 per cent as agricultural commodities and energy prices are projected to increase. Over the coming decade, the Canadian agriculture and agri-food industry is projected to grow steadily, both in the domestic and export markets. Total domestic agriculture and food processing sales[1] are projected to reach $127 billion in 2025. Total agriculture and agri-food export values are projected to reach $66.3 billion in 2025. Including fish and seafood, total agriculture and agri-food export values are projected to reach $75 billion.

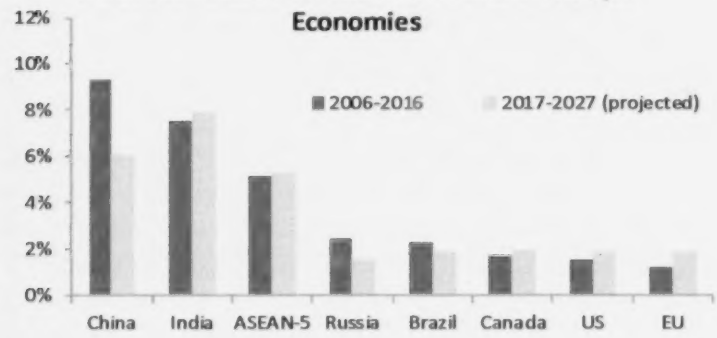
[1] Domestic agriculture and food processing sales are the combined sales at the farm and processing level minus all agriculture and agri-food exports.

Projections indicate that Canada would remain competitive amongst changing macroeconomic conditions

Over the medium term (2017-2027), world economic performance will drive agricultural trade levels and help determine the growth trajectory for much of Canada's farm sector.

Although China's growth is projected to be below rates seen in the previous decade, due partly to labour and environmental constraints, its economy will continue to expand, while other emerging economies are projected to experience a slight acceleration in growth. This is the case with regard to India, at 7.9 per cent annual growth and the Association of Southeast Asian Nations (ASEAN-5) countries, at 5.3 per cent. Although major developed economies, including the U.S. and the EU, have expanded at comparatively low rates, the International Monetary Fund (IMF) projects a modest acceleration in GDP growth over the next decade in those economies. (See Chart 1)

Chart 1: Annual GDP Growth in Selected Major Economies



Source: World Economic Outlook Database, October 2017 - International Monetary Fund, ASEAN-5 composed of: Indonesia, Malaysia, Philippines, Thailand and Vietnam.

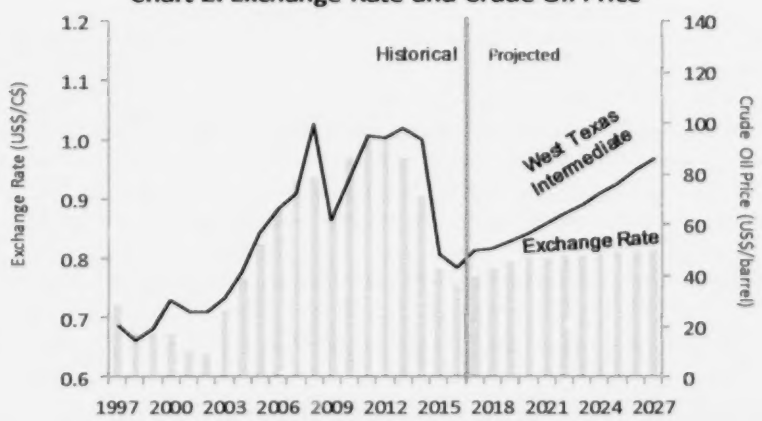
The Canadian economy, which grew at 3.1 per cent in 2017 due to strong consumer spending and a rebound in business investment, is forecast to grow by 2.0 per cent in 2018, as it starts to face capacity constraints. Over the medium term, growth is projected to be 1.9 per cent per year, which is a slight increase compared to the 2006-2016 period.

Other important macroeconomic drivers for the farm sector include the value of the Canadian dollar and the price of crude oil. Both of these have declined significantly in recent years, leading to lower fuel costs and higher prices for agricultural commodities priced in U.S. dollars.

The West Texas Intermediate (WTI) benchmark price fell from US$94 in 2012 to a low of US$27 in early 2016 before climbing to US$50 in 2017. It is projected that world economic growth and resulting energy demand will contribute to a gradual increase in oil prices, with the WTI reaching US$86 by 2027. (See Chart 2)

Between 2012 and 2017, the value of the Canadian dollar declined from an average of US$1.00 to US$0.77. A lower Canadian dollar not only increases export competitiveness of Canadian agricultural exporters by reducing the export prices denominated in U.S. dollars but also generates higher domestic prices for Canadian producers. In 2018, projected interest rate increases that could total 75 basis points by the end of the year would contribute to a modest appreciation of the dollar, which is projected to reach US$0.81 by 2023 and remain stable until 2027.

Chart 2: Exchange Rate and Crude Oil Price

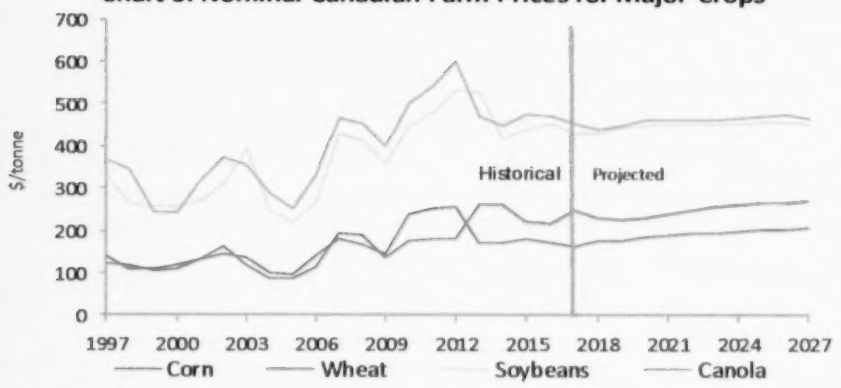


Source: Conference Board of Canada 2017, AAFC Calculations.

Prices for major crops are projected to be generally stable

World grains and oilseeds prices are projected to grow moderately over the medium term, as global demand is projected to outpace supply. More specifically, prices are projected to be up slightly, ranging from 0.7 per cent for soybeans to 2.5 per cent for wheat.

Chart 3: Nominal Canadian Farm Prices for Major Crops



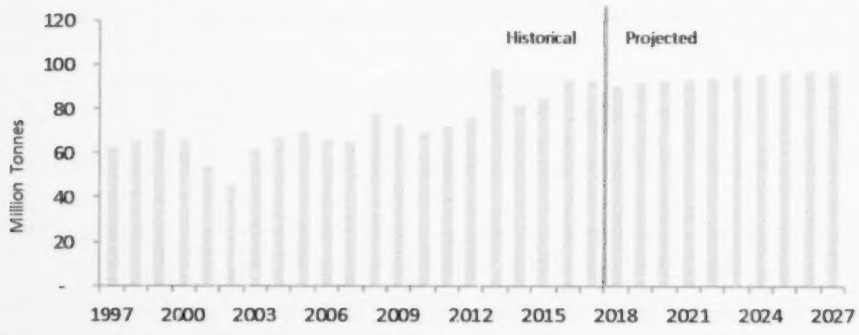
Source: Statistics Canada, AAFC Calculations.

As Canada is a price-taker for grains and oilseeds, our domestic prices are closely linked to world markets and are currently relatively low due to record global supply and high stocks. Canadian prices (nominal) are projected to follow global trends and rise slightly over the coming decade. Global demand continues to slightly outpace supply. The higher price plateau for crops that has prevailed since 2007 has been partly due to rapid growth in biofuel production. However, global biofuel production is projected to grow modestly over the next decade as current mandates are filled and no new mandates are included. In Canada, since the biofuel mandates are a fixed share of fuel consumption which is forecast to decline over the next decade (National Energy Board), it would lead to downward pressure on ethanol consumption, and consequently, production. Although prices are projected to be lower on average than they were during the previous decade, they are projected to remain higher than the levels seen before the commodity price boom that started in 2006. (See Chart 3)

The 2017 crop year is set to be the second largest on record in terms of production

Although the 2017 growing season was characterized by dry conditions in parts of Western Canada and excess precipitation in some parts of Eastern Canada, overall yields and quality for most crops were significantly better than in the previous year. Production of canola, soybeans, oats and corn was higher, while output of total wheat and barley declined. Output of pulses and special crops fell significantly due to lower production of peas and lentils. Total crop production for 2017 is estimated at 93.1 million tonnes (Mt), the second highest after the harvest of 2013, which saw an output of 98 Mt.[2]

Chart 4: Total Crop Production, Canada



Source: Statistics Canada, AAFC Calculations.

Assuming trend yields, total crop production is projected to be slightly lower in 2018 and 2019, but by 2027, is projected to reach 97.4 Mt, very close to the record set in 2013. (See Chart 4)

[2] The crop year for most crops is Aug-Jul while for corn and soybeans it is Sept-Aug. Final numbers for the 2017-18 crop year will be available in late 2018.

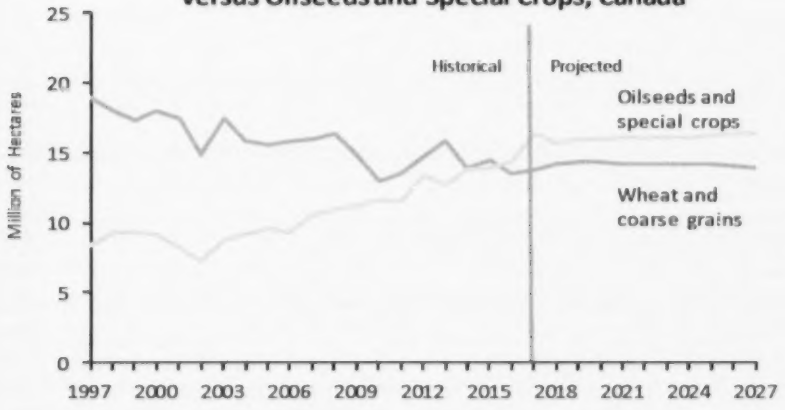
Wheat and coarse grains acreage is projected to stabilize over the medium term

Production of wheat (excluding durum) in 2017 increased by 4 per cent to 25 Mt due to a 1.5 per cent increase in seeded area and low rate of abandonment (refers to seeded areas that are not harvested), according to Statistics Canada. Abandonment was particularly high in 2016 because of wet weather during harvest.

Durum wheat production in 2017, at 4.96 Mt, was 36 per cent lower than the record levels set in 2016 due to a decline in seeded area and to lower-than-trend yields, which resulted from below-average precipitation. However, the average grade quality of the durum crop was significantly higher than in 2016, when it was negatively affected by rains at harvest time. While an uncharacteristically large proportion of the 2016 crop was not exported and instead used as feed, for the 2017-18 marketing year, exports of durum are projected to rise by 6 per cent to 4.8 Mt because of better quality and stronger U.S. demand.

Over the medium term, wheat area in Canada is projected to remain relatively stable as new wheat classes are available following the Canadian Grain Commission (CGC) plan to modernize Canada's wheat classes and announcement of two new classes as of August 1, 2017. These new classes offer additional options for producers as well as providing new sales opportunities and alternative crop varieties to add to their crop rotation.

Chart 5: Harvested Area of Wheat and Coarse Grains versus Oilseeds and Special Crops, Canada



Source: Statistics Canada, AAFC Calculations.

Corn production in 2017, at 14.1 Mt, was the second highest ever, due to higher than average yields and near record area. Corn acreage is projected to grow modestly over the medium term as expansion is limited by Canadian growing conditions.

Over the medium term, relatively robust coarse grain prices are projected to incentivize increased acreage. Barley area is projected to stabilize after having been reduced by almost half since the early 2000s, as canola, pulse and soybean areas expanded in Western Canada. (See Chart 5)

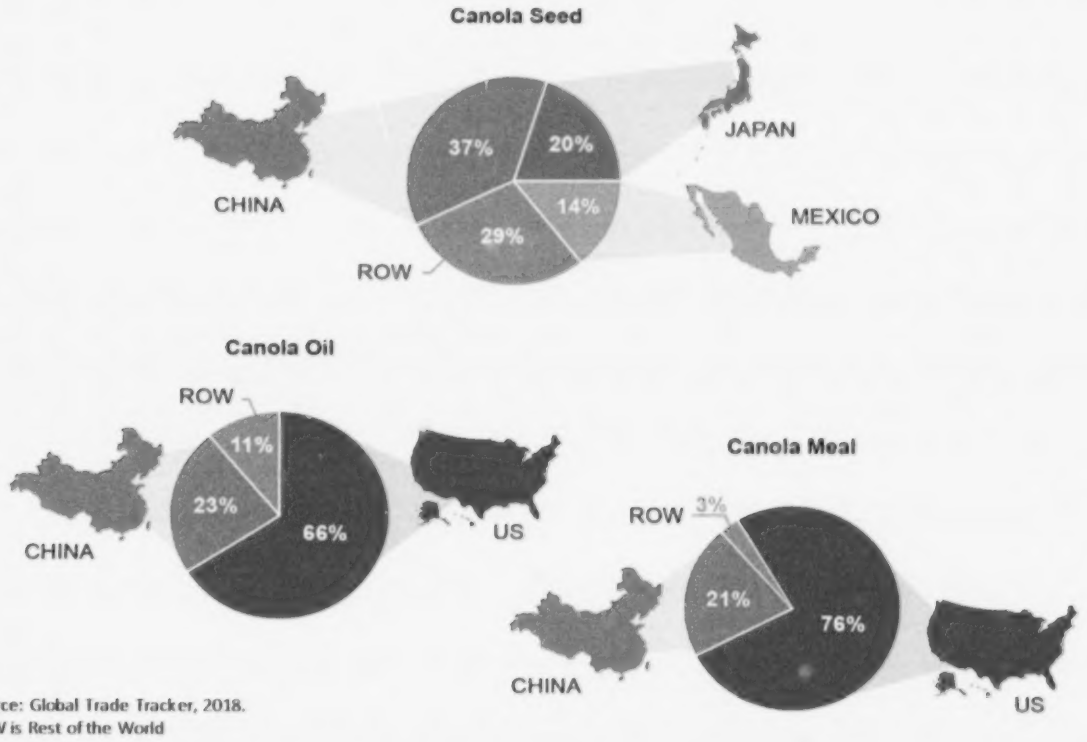
Prospects for Canadian oilseeds remain strong

The medium-term projection for oilseeds is favorable. Although prices are projected to be relatively flat, the increasing world appetite for oilseeds and value-added oilseed products are projected to absorb expanding domestic production of canola, soybeans, and flax seed varieties. This follows significant growth over the previous decade. Output of canola for the 2017-18 crop year is forecast to be the highest ever, at 21.3 Mt. This will be a 9 per cent increase from the previous crop year, driven by record acreage. Acreage is projected to increase further in 2018 and 2019, partly in response to demand from the U.S. and Asian markets, in particular China.

Over the rest of the medium term, acreage is projected to decline modestly and then stabilize, as crop rotation strategies to avoid disease outbreaks and soil deterioration are implemented. Production is projected to rise as yields increase by an average of roughly 1.5 per cent per year due to biotechnology-related improvements in seed varieties.

Canola processing in Canada is approaching maximum capacity and the MTO is assuming no new crushing facilities over the next decade. Given projected increases in canola production and limited growth in crushing volumes, projections indicate that there will be greater exports of raw seed and slightly higher stocks. The majority of canola oil and meal is exported to the U.S. while seeds are exported to Asia, in particular Japan and China. (See Figure 6)

Figure 6: Canola and By-Products, Export Share by Destination, 2016



Source: Global Trade Tracker, 2018.
ROW is Rest of the World

Canola remains a profitable commodity with little downside commercial risk. Although there is growing competition across the globe, profit margins remain high and a weaker Canadian dollar continues to benefit this export-oriented commodity. Since a very large share of domestic production is exported, market access restrictions in importing countries represent the main risk to the outlook.

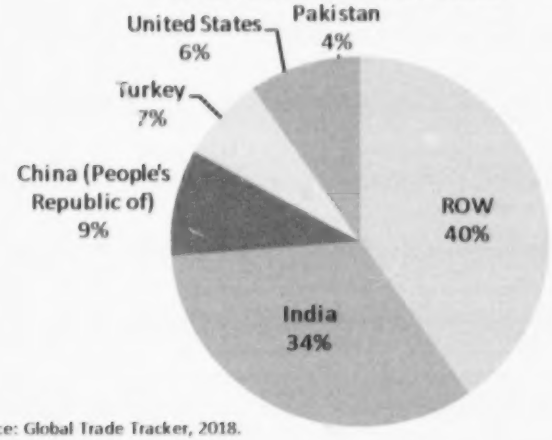
Increasing plantings of soybeans in Western Canada is leading Canadian production to record highs. Soybean output also reached a record in 2017 at 7.7 Mt, a 17 per cent increase over the previous year. Production in 2018 is projected to climb by a further 5 per cent. These production increases are driven almost entirely by a surge in acreage. Although soybeans have traditionally been cultivated in Eastern Canada, production in Western Canada has taken off since the mid-2000s. New crop varieties have stimulated production, mostly in Manitoba, and more recently in Saskatchewan. Although Western acreage has grown significantly in recent years, it is projected that area will grow at a slower pace over the medium term because of agronomic limitations. However, production is projected to continue growing over the medium term, as soybean is increasingly included in crop rotation for its nitrogen fixing properties and as yields steadily progress, benefitting from genetically modified (GM) varieties. Although prices are projected to grow only modestly, total global demand for soybeans is very strong, and should easily absorb increased quantities for export.

Pulse production is projected to undergo short term declines, but the long term outlook is positive

The year 2017 saw a decline in pulse production, driven by two factors. First, 2016 was recognized as the International Year of Pulses by the Food and Agriculture Organisation of the United Nations (FAO), which led to a temporary increase in worldwide and Canadian production and consumption, followed by a decline. Second, the impact of India's unexpectedly large pulse harvest and subsequent tariff hikes discouraged imports to that country.

India imports a large share of Canadian pulses, leaving the Canadian market vulnerable to Indian bumper crops and other shifts in demand.

Chart 7: Canada's 2016 Crop Year Pulse Export Destination Share, By Value



Source: Global Trade Tracker, 2018.

As a result, prices dropped significantly in the latter part of 2017 and are projected to remain lower in the short term. This is putting downward pressure on Canadian acreage and production, but growth is projected to resume in 2019 and continue for the rest of the medium term.

On average, 80 per cent of Canadian pulse production is exported. Roughly 34 per cent of all pulse exports go to India, in particular lentils and dry peas. (See Chart 7)

Overall domestic and international performance of grains and oilseeds is positive

The projection for Canadian crops remains encouraging. Domestic production is projected to be strong while agricultural producers continue to export around the world. Wheat production is projected to decline slightly, while coarse grains, oilseeds and high-value special crops are projected to see increases. Domestic sales for crops, which include primary and processed agricultural products, are robust and expected to grow at an average rate of 2.4 per cent over the projected period, 0.1 per cent lower than total domestic agricultural sales.

Total manufacturing shipments[3], an indicator of domestic processing value, are projected to see average growth of 2.1 per cent over the next decade. Oilseed processing and bakery products, two items that account for almost 17 per cent of all agricultural manufacturing shipments, are projected to continue to expand over the next decade, with average growth rates of 1.4 per cent and 1.0 per cent respectively. Grain and oilseed products should see export value growth rates of 1.7 per cent and 2.0 per cent respectively over the next ten years outpacing grains and oilseeds bulk value exports. As processing capacity is projected to be limited going forward, any additional crop production is likely to be exported in bulk rather than processed form.

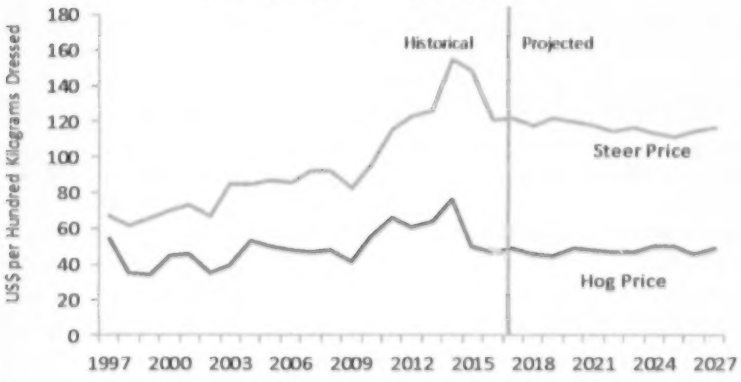
[3] Manufacturing shipments reports the production of goods produced by Canadian establishments in the manufacturing sector. It measures the monetary value, not the quantity of manufactured goods produced.

Livestock prices are projected to remain relatively stable

North American cattle prices have declined from peaks reached in 2014 and are not projected to increase in the medium term (See Chart 8). They are projected to remain stable, although at a higher overall plateau than during the early 2000's. The gradual recovery of the North American cattle inventory is a contributing factor to this stability.

The continuation of a low Canadian dollar helps mitigate the impact of relatively low U.S. prices for Canadian cattle and hog producers. The wholesale beef price is projected to decline by 9 per cent by 2027, while the retail beef price is projected to increase by 20 per cent reflecting the increasing costs of food marketing and inputs such as labor, packaging, transportation, and energy.

Chart 8: U.S. Livestock Prices



Source: OECD-FAO Agricultural Outlook 2017-2026, AAFC Calculations, 2027

Hog prices also peaked in 2014 as a result of lower supply due to the Porcine Epidemic Diarrhea Virus (PEDv) outbreak in the U.S. Since then, prices have declined and are projected to remain relatively stable at levels seen before the peak (see Chart 8). The Canadian hog price is projected to increase by only 1.5 per cent by 2027, at which point it would be 7.5 per cent lower than the 2012-2016 average. One factor holding back prices would be larger litters that contribute to higher supplies. The wholesale pork price is projected to decline by 5 per cent while the retail pork price is projected to increase by 13 per cent over the same period due to rising costs.

Small gains in production are projected for livestock and red meats

Total cattle marketings and beef production are projected to increase slightly over the medium term, by 1.4 per cent and 6 per cent, respectively. Herd recovery is projected to continue as producers hold back heifers for breeding after an extended period of liquidation in Canada and the U.S., largely caused by droughts and high feed costs. Canadian cattle slaughter is projected to increase modestly before levelling off and then decline slightly towards the end of the medium term. The breeding herd is projected to expand by 5 per cent by 2027.

Hog marketings and pork production are also increasing, with a projected 2 per cent and 6 per cent growth, respectively, over the medium term. At the same time, hog inventories are projected to show slight growth. Output expansion has been supported by favourable feed costs and export markets benefiting from the relatively low Canadian dollar. Among marketed live animals, the proportion of those destined for domestic slaughter as compared to those destined for export is projected to remain steady. Weight gains are projected to drive growth in production given that hog slaughter is projected to remain stable and average carcass weights are projected to rise due to more efficient feeding practices and processor preferences for larger animals.

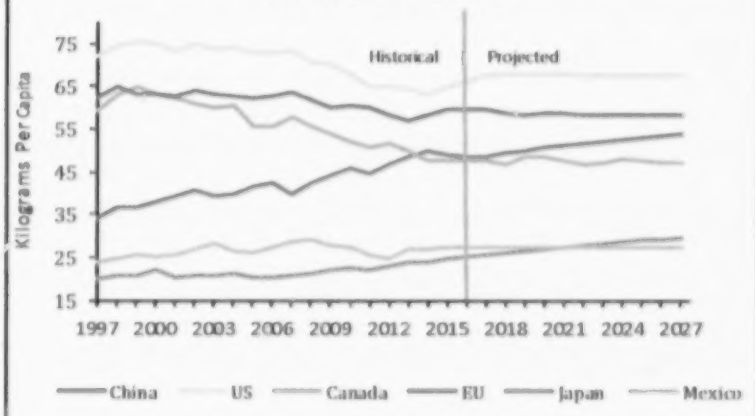
Feed prices for the livestock industry are presently at a relatively low level, which is favorable for the livestock industry, but are projected to gradually increase by 9 per cent by the end of the medium term, assuming no major weather events that could disrupt markets.

Despite modest growth projected for cattle and hog production, there are challenges going forward such as a labour shortage, a need for increased efficiency in the processing sector, as well as declining domestic per-capita consumption.

Exports continue to be vital to the red meat and livestock sector

Canadian producers are projected to continue to rely on exports to support production growth as international demand expands while domestic consumption declines. Rising average incomes and a growing middle class in a number of emerging economies have had a positive impact on global meat demand. Going forward, this growth is projected to continue, but in some cases at a lower rate than in the past. China's meat consumption is projected to see a less steep growth trajectory and then level off over the medium term. (See Chart 9)

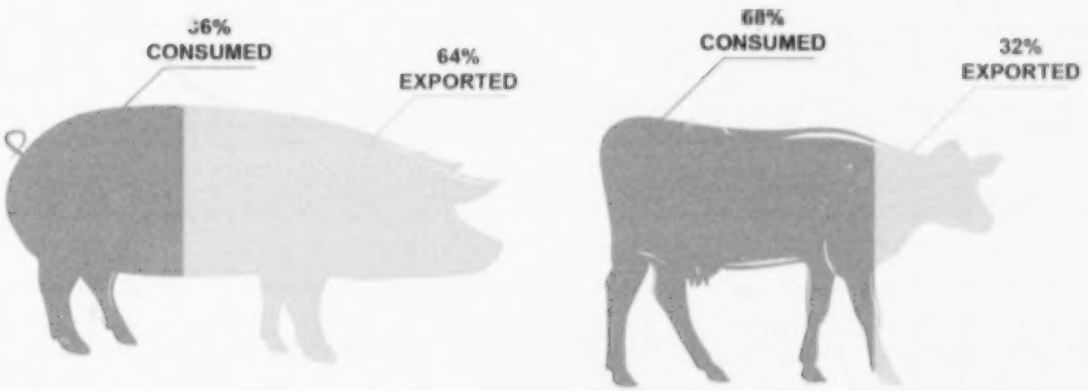
Chart 9: Per-Capita Red Meat Consumption, Selected Countries



Source: OECD-FAO Agricultural Outlook 2017-2026. AAFC Calculations, 2027

Although demand for red meat in most developed economies could be limited by changing diets and a low population growth rate, Japan's per-capita consumption is projected to increase, creating opportunities for Canadian producers.

Figure 10: Exports as a Share of Meat Production, Beef and Pork, Canada, 2016



Over the medium term, beef exports are projected to grow annually at an average rate of 1.7 per cent per year. Canada's total beef trade balance, including live animals, is positive. In 2017, live animal exports accounted for a third of the beef/cattle trade balance, almost all of which go to the U.S. Live cattle exports are projected to continue to increase, with the number of slaughter cattle increasing by 2.6 per cent annually and feeder cattle by 4.2 per cent.

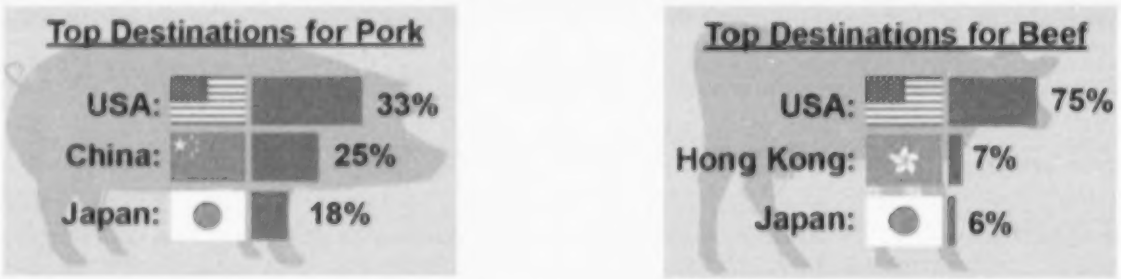
Pork exports are projected to increase modestly, at 1.4 per cent per year. Pork has long had a strong export orientation, and this is projected to increase further, with exports reaching 69 per cent of total disposition by

2027. Canada's total pork trade balance, including live animals, is also positive. In 2016, live animals accounted for 11 per cent of total trade.

While pork exports are relatively diversified by destination, 75 per cent of beef exports go to a single market, the U.S. However, the implementation of new trade agreements, including the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) could help diversify Canada's beef exports, as important markets such as Japan are set to provide significantly improved market access. After the U.S., Hong Kong (7 per cent share of total exports) and Japan (6 per cent share of total exports) are Canada's top destinations for beef.

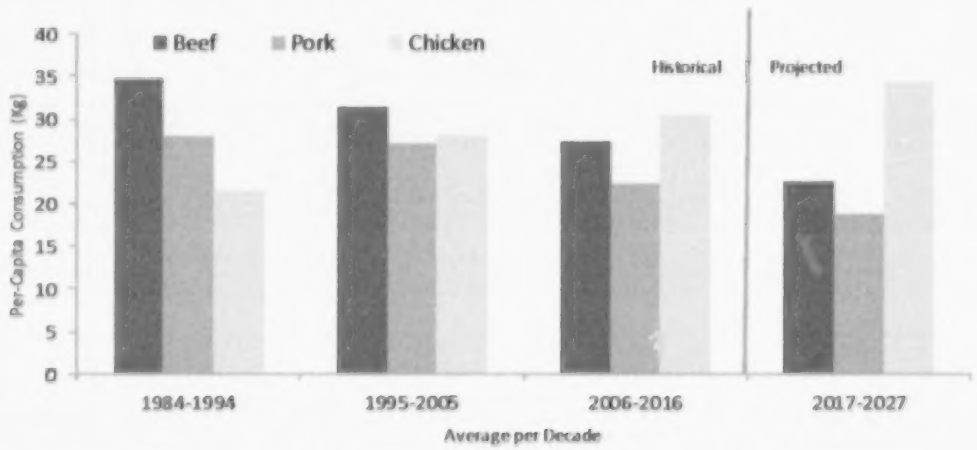
Canadian pork exports are relatively diversified by destination; however, 75 per cent of beef exports go to a single market, the U.S.

Figure 11: Canadian Red Meat Export Destinations, 2016



Canadian beef consumption for the period 2017-2027 is projected to be 18 per cent lower on average than in 2006-16. Per-capita pork consumption is projected to be 16 per cent lower on average during the period 2017-27 compared to 2006-2016. (See Chart 12)

Chart 12: Canadian Per-Capita Meat Consumption



Source: Statistics Canada, AAFC calculations.

Most of the growth in production at the farm level is exported as the MTO assumes limited growth in domestic consumption. Domestic sales, including live animals and red meat products are projected to go down slightly in the coming decade, dropping $854 million by 2027, mainly due to declining per capita consumption. In 2017, red meat was the sector generating the highest manufacturing shipments, amounting to $21.4 billion. However they are projected to fall slightly, mainly due to limited slaughter capacity. Exports of live animals should see modest and positive growth over the next decade, while red meat products exports remain stable.

Positive consumer perceptions of poultry and eggs drive increased production

The poultry industry operates under a supply management system which ensures that Canadian market demand for chicken and turkey is primarily met by Canadian farmers.

Chicken has historically shown the highest consumption growth among meats, based on sustained population increase and rising per-capita consumption. This has been helped in part by the public's perception of chicken as a healthy and inexpensive meat. The major exception to this steady demand growth was the period of stagnating demand during the economic slowdown from 2009 to 2011.

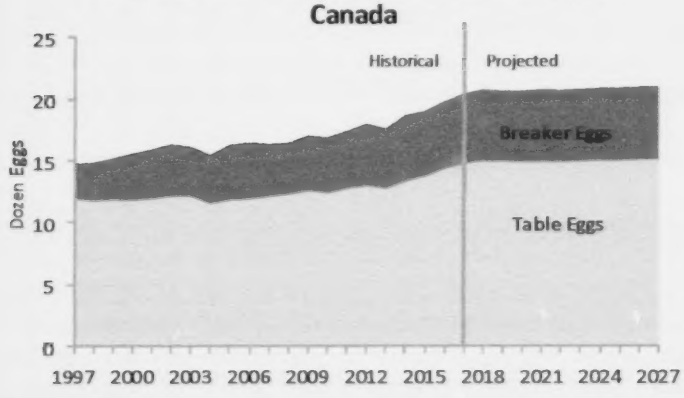
Canadians preferences have shifted towards chicken primarily due to the perception that chicken is leaner and therefore healthier than other meats.

Growth in total consumption of chicken over the medium term is projected to be 1.9 per cent annually, based on population growth and higher per-capita consumption. Consumer preferences for white meat in Canada are not projected to change significantly, allowing continued exports of mostly dark meat.

Turkey consumption is projected to grow at 1.1 per cent, a slightly lower rate than for chicken. Per-capita turkey consumption is not projected to grow, partly because declining household size reduces demand for whole birds. At the same time, an increasing share would be used for further processing, in particular cold cut manufacturing.

Per-capita consumption of eggs is projected to increase slightly

Chart 13: Per-Capita Consumption of Eggs, Canada



Source: Statistics Canada, AAFC Calculations.

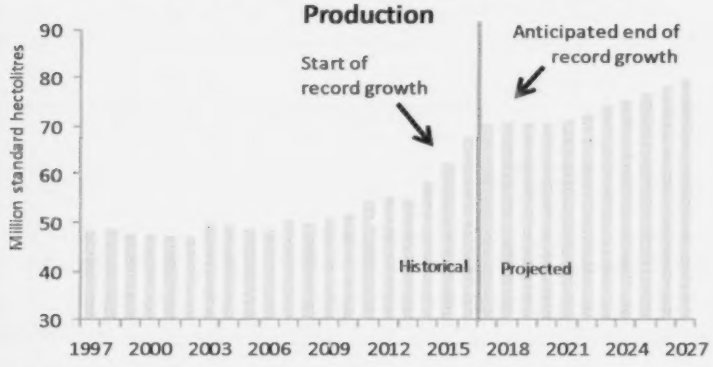
Total egg consumption in Canada saw significant growth in the past decade and is projected to expand at a 1.6 per cent annual rate going forward. This growth is two-fold: increased use of table eggs and expansion in the market for manufacturing or "breaker eggs". Between 2012 and 2016, consumption of breaker eggs increased by 21 per cent due to growing demand for prepared foods, while table egg consumption increased by 19 per cent over the same period (See Chart 13). Both increases have been driven by consumer perception of eggs as a convenient, low-cost source of protein. Breaker eggs are priced comparably to industrial eggs from the U.S.

Going forward, most of the growth in egg consumption is projected to be based on population increase, as per-capita consumption is projected to expand more slowly.

Growing butterfat demand is driving milk production increases

The dairy sector in Canada operates under supply management, which involves setting production levels through quotas. Most imports of dairy products are limited by tariff rate quotas while exports are limited by Canada's export subsidy commitments under the World Trade Organization (WTO) rules. With limited trade, growth in milk demand has until recently been modest but steady, coming mostly from domestic population growth.

Chart 14: Growth in Canadian Industrial Milk Production



Source: Statistics Canada, AAFC Calculations.

The Canadian dairy sector has recently seen a period of unprecedented growth. Starting in 2015, demand for milk, especially from high butterfat content products (such as butter and cream) expanded. This is part of a trend in developed economies, where consumers have started to view milk as a wholesome product, and are buying more full fat dairy products such as butter and cream. For the period between 2013 and 2017, industrial milk production grew by 28.7 per cent. Over the coming decade, demand and production are projected to increase more slowly, at an average annual growth rate of 1.2 per cent, an increase of 11 per cent over ten years, driven mainly by population growth. (See Chart 14)

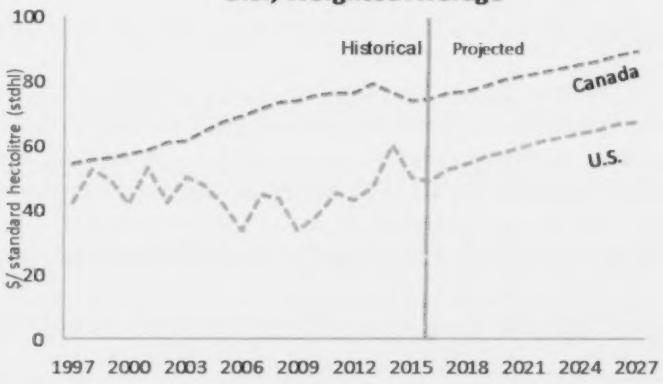
Domestic sales, which drove the recent surge in the dairy sector, are projected to increase by almost $7 billion during the next decade. Dairy products are the second largest contributor to Canadian agricultural manufacturing shipments and account for 15 per cent of the total. Dairy products manufacturing shipments are projected to go from $15.8 billion in 2017 to $20.4 billion in 2027, an increase of 29 per cent. This growth rate is 10 per cent higher than the overall manufacturing shipments growth rate of 19 per cent, largely driven by a large projected increase of dairy product prices.

Farm gate prices of milk for both Canada and the U.S. are projected to grow steadily over the medium term

As production has expanded to meet the increasing demand for butterfat, both butterfat and solids-non-fat (SNF) are produced in greater quantities. The additional production of SNF is marketed in lower-price milk classes, where revenues are driven by conditions on world dairy markets that were depressed in recent years. Although dairy farmers experienced declining prices for several years, reaching a low point in 2015, the weighted average price from 2017 onward is projected to increase annually by an average of 1.6 per cent, reaching $89.12 per hectoliter by 2027. (See Chart 15)

The U.S. dairy industry, which is not under supply management, is more exposed to international

Chart 15: Farm Gate Price of Milk, Canada and U.S., Weighted Average



Source: Statistics Canada, AAFC Calculations.

markets than Canada's sector. Farmers, processors, retailers and consumers face prices that rise and fall as a result of often volatile market conditions. In 2014, the U.S. farm gate price of milk reached a record high of $60.33 per hectolitre (converted to Canadian currency) and subsequently declined to $52.70 in 2017. Over the medium term, it is projected to see a slow, but steady progression, increasing to $67.30 by 2027. (See Chart 15)

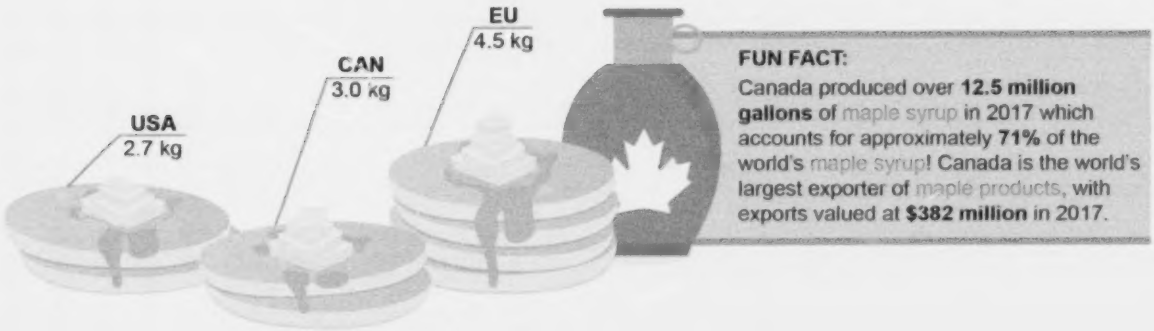
The EU consumes more cheese and butter in comparison to Canada and the U.S.

Although Canadian per-capita consumption of cheese is projected to see modest growth, increasing from 13.3 kilograms (kg) in 2017 to 14.3 kg in 2027, consumption in the U.S., and especially the EU, is projected to remain higher at 18.4 and 20.0 kg, respectively, by 2027.

With respect to butter, the EU consumes a significantly larger amount on a per-capita basis, 4.5 kg per person in 2017, compared to 3.0 Kg in Canada and 2.7 kg in the U.S. (See Graphic 16)

Butter consumption grew rapidly over the past few years and is projected to continue to increase over the medium term.

Graphic 16: Butter Consumption Per-Capita, For Canada, U.S., and EU (kg), 2016


EU
4.5 kg
CAN
3.0 kg
USA
2.7 kg
FUN FACT:
Canada produced over 12.5 million gallons of maple syrup in 2017 which accounts for approximately 71% of the world's maple syrup! Canada is the world's largest exporter of maple products, with exports valued at $382 million in 2017.

Source: Statistics Canada, AAFC Calculations.

When low-fat diets gained popularity in the 1990s and early 2000s, Canadian butter consumption remained steady despite its high fat content. More recently, butter consumption has grown because of consumer preferences for wholesome products. Although Canada's dairy consumption is not projected to converge with European levels over the coming decade, the size of the gap in butter consumption suggests that there remains significant growth potential for the domestic dairy sector. Further growth is projected over the medium term, with domestic consumption reaching 135 Kt by 2027.

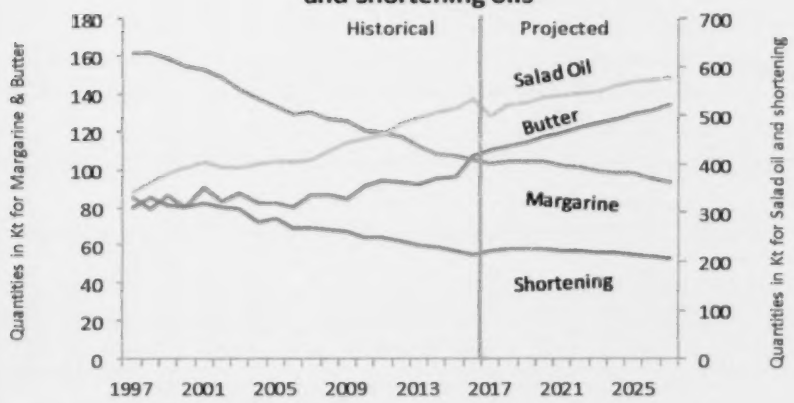
Beyond butter, Canadians have changed their consumption patterns of oils and fats

Fats and oils are important raw materials and functional ingredients used for both food applications (such as confectionery, bakery, ice creams and other specially tailored products) and industrial uses (animal feeds, soaps, biodiesel, etc.). They are consumed in a wide variety of products, including butter, shortening, margarine, and salad oils. Manufacturers of these products are major customers for the Canadian oilseed and dairy sector. These products are occasionally substituted for each other based on price, diets, consumer tastes and government policies that affect food consumption.

Margarine and shortening consumption have been in continuous decline in Canada since the late 1990s. This was due to a large extent to trans-fats becoming a public health issue and the perception that margarine and shortening contributed to an increasing risk of heart disease. As butter and salad oils are partially substitutable for margarine and shortening, they both benefited from this issue.

Canada's consumption of margarine and shortening oils fell since the end of the 1990s, driven by changing consumer habits.

Chart 17: Total consumption of butter, margarine, salad and shortening oils



Source: Statistics Canada, AAFC Calculations.

Salad oils can be used for cooking, and sometimes replace butter for that purpose, but more importantly, they have replaced shortening and hydrogenated margarine containing trans-fat. As a result, total domestic consumption of salad oils has been increasing steadily for the last two decades. It is projected to continue its growth, at an average annual rate of 0.7 per cent from 2017 to 2027, to reach 578 Kt. (See Chart 17)

Margarine consumption is projected to decrease on average by 1.1 per cent annually over the medium term. While many trans-fat-free margarine brands are now available, the time required for perceptions to change and the current consumer orientation toward wholesome products suggest that the decline in consumption of margarine has not bottomed out. Consumption of shortening is projected to keep declining as Canadians continue to replace it with what are perceived to be healthier alternatives.

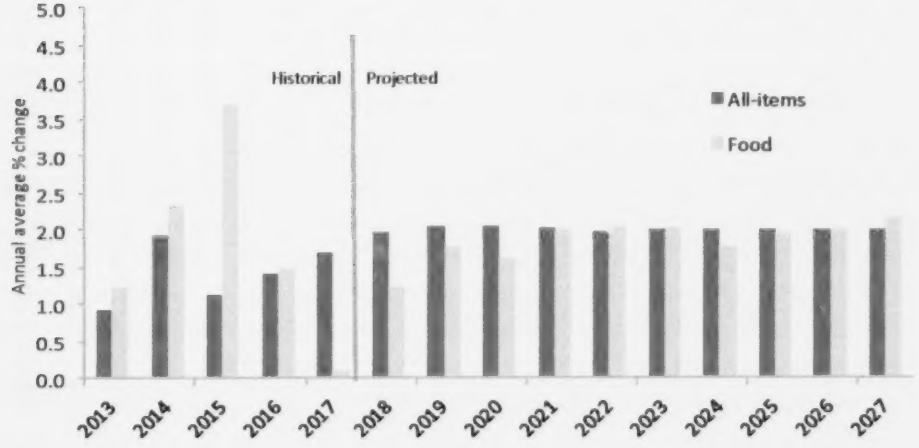
Following a significant increase in 2015 and a moderate increase in 2016, food prices did not go up in 2017

While inflation in general has been increasing in the last three years, the price of food has dropped markedly.

In 2017, the average annual increase in the consumer price index (CPI) stood at 1.6%, following increases of 1.4% in 2016 and 1.1% in 2015.

Meanwhile, food prices crept up merely 0.1% in 2017, after rising by 1.5% in 2016 and 3.7% in 2015. This is the lowest rate of food inflation since 1992. The increase in the price of restaurant food (+2.6%) was largely offset by the decline in the price of store-bought food (-1.0%). Fresh fruit (-3.1%) and fresh vegetables (-1.9%) dropped after an increase in 2016. Dairy values experienced a more noticeable average annual decline in 2017 (-1.2%) than in 2016 (-0.8%). The price of meat and bakery goods also went down in 2017. The average Canadian household spends about 30% of its food budget on restaurants.

Chart 18: Canadian Inflation Rate, All-Items and Food



Source: Statistics Canada, AAFC Calculations.

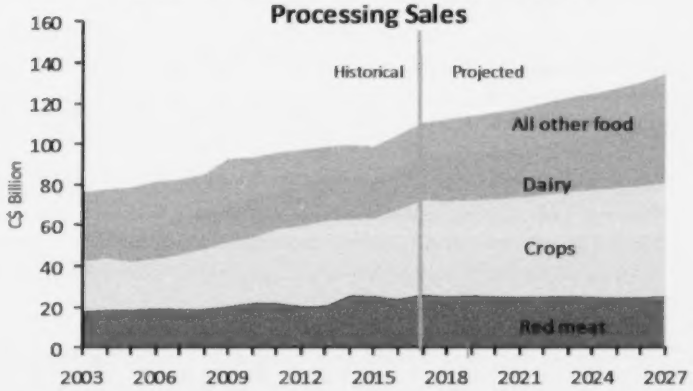
The decline in prices stems from multiple factors, including a higher than anticipated Canadian dollar; meat, fruit and vegetable prices that were much higher than normal in 2014 and 2015; and stiffer competition among retailers.

From 2017 to 2027, food inflation is expected to be close to the historical average of 2%. The strongest price increases will affect restaurant food (2.1%), fruits (1.9%) and vegetables and dairy products (1.8%).

Canada's agricultural and agri-food sector is projected to continue to experience steady growth

Over the coming decade, the Canadian agriculture and agri-food industry is projected to grow steadily, both in the domestic and export markets. At the farm level, Canadian agricultural producers are projected to benefit from sustained demand for their products. The agri-food processing industry is also projected to grow over the next decade. Value of manufacturing shipments for agri-food products, including seafood, is projected to increase from $115.7 billion in 2017 to $137.3 billion in 2027, an increase of almost 19 per cent.

Chart 19: Domestic Agriculture and Food Processing Sales



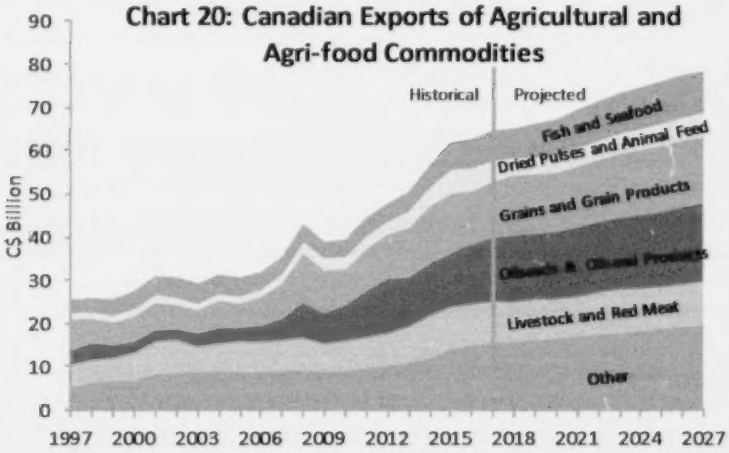
Source: Statistics Canada, AAFC Calculations.

The value of Canadian agricultural and agri-food exports is projected to reach $66.3 billion by 2025, including fish and seafood exports would reach $75 billion by 2025.

The supply-managed sectors are projected to continue growing their processing industries over the next decade, due to strong domestic demand for high butterfat dairy products as well as continued strong demand for chicken and chicken products. Total domestic agriculture and food processing sales are projected to reach $127 billion in 2025. (See Chart 19)

The value of Canadian exports of agriculture and agri-food products is projected to continue to climb over the next decade, from $57.7 billion in 2017 to $68.8 billion in 2027, for an average annual increase of 1.9 per cent. For 2025, the value of exports for agricultural and agri-food would reach $66.3 billion. Fisheries and Oceans Canada has recently completed a Medium Term Outlook for the fish and seafood sector. When including fish and seafood, the value of exports would reach $74.6 billion by 2025, roughly in line with the Budget 2017 target of $75 billion by 2025. (See Chart 20)

Chart 20: Canadian Exports of Agricultural and Agri-food Commodities



Source: Statistics Canada, AAFC Calculations.

Among agricultural and agri-food products, grains, oilseeds, and special crops (including downstream processing) are projected to continue to account for slightly more than half of all exports. These products should see both higher volumes and prices, although growth is projected to be modest. The second largest export category is live animals, red meat, and other animal products, which is projected to make up 15 per cent of Canada's agricultural and agri-food exports by 2027.

The structure of Canada's exports has evolved toward a relatively higher value-added content, with more products being processed before shipping. There remains considerable room for growth in this area. For example, more than 50 per cent of canola and 70 per cent of soybean exports are projected to be in bulk form. When crushing is done in Canada, oil and protein meal exports generate 20 per cent more value than bulk seed exports.

Medium Term Outlook Highlights

- World economic growth is projected to help drive continued expansion in demand for Canadian farm products. Although China is projected remain a significant source of growth, India and Southeast Asia are projected to become increasingly important.
- Low oil prices over the last few years, which have helped the Canadian farm sector, are projected to gradually rebound by 2027. The low Canadian dollar, which has also been beneficial, is projected to increase only slightly, to US$0.81.
- Grain prices are projected to see only marginal gains over the medium term, as rising yields and a plateauing in world production of biofuels affect the supply-demand balance.
- Following a very large harvest in 2017, Canadian crop production is assumed to return to trend yields and increase overall by 0.9 per cent per year. Oilseed production is projected to increase relatively fast due to yield improvements from GM seeds.
- Although North American cattle and hog prices are not projected to increase after declining from their peaks in 2014, Canadian producers are projected to continue to benefit from the effects of the relatively low Canadian dollar on domestic prices.
- Canada's strong export orientation in red meats is projected to increase, with exports of live slaughter cattle increasing at an annual rate of 2.6 per cent while pork exports reach 69 per cent of total disposition by 2027.
- Poultry demand is projected to remain strong, and production is projected to increase throughout the medium term.
- Consumption of eggs in Canada is projected to continue to increase, driven partly by rising per-capita consumption, but mostly by population growth.
- Canadian markets for milk, butter and cheese are projected to remain strong in the short-term as supply and distribution patterns respond to sustained increases in consumer demand for butterfat.
- The farm gate price of milk for both Canada and U.S. are projected to grow over the medium term.
- Food inflation was 0.1 per cent in 2017, its lowest level since 1992, due in particular to a higher than projected exchange rate and beyond normal price levels in 2014 and 2015. We expect food inflation to return to the historical average of 2 per cent between 2017 and 2027.
- The value of Canadian agricultural and agri-food exports is projected to reach $66.3 billion by 2025, including fish and seafood exports would reach $74.6 billion by 2025.

Uncertainties that could affect the projections

While the MTO's projections are an extrapolation of what could occur based on a set of assumptions, the actual state of the sector during the projection period would likely differ from the baseline, particularly as we go further into the future, as weather, policies, macroeconomic conditions, and technology would likely change.

On the supply side, adverse weather events may cause higher volatility in global supplies and prices. Agricultural prices could be affected by a potential further slowdown in economic growth of fast-growing economies and by lower energy prices. As well, a stronger-than-projected Canadian dollar could put downward pressure on U.S. dollar-denominated prices. Environmental and animal health regulations are becoming important factors that could impact global supply of agricultural products (e.g., the use of antimicrobials in the production of meat, the use of feed additives such as ractopamine, and carbon mitigation constraints in livestock production).

On the demand side, changes to biofuel policies across the world (i.e., the European Union, Brazil, the U.S. and China) could impact the projections regarding the demand for cereal. In addition, the nature of consumption is also challenging the agricultural sector to introduce more value added to products in order to respond to consumer concerns on health issues.

Trade policies remain a major factor that influences world agricultural markets. The implementation of new trade agreements could change the projections over the medium term by diversifying trade (e.g., implementation of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), NAFTA renegotiations, EU-Japan Economic Partnership Agreement (EPA), etc.). Unilateral trade policy decisions are another risk factor. For example, in 2017 the Russian Federation extended until the end of 2018 an import ban on foods imported from the U.S., Australia, Norway, Canada and the European Union in response to economic sanctions. This ban has been in effect for four years and has so far led to a large decline in meat imports, higher producer price volatility and higher consumer prices. Recent policy changes in Argentina concerning the elimination of export taxes might have an impact on international cereal markets.

An important factor with the potential to impact domestic and regional, production, consumption and trade would be a development related to sanitary, phytosanitary and food safety concerns arising from animal disease outbreaks. For example, Brazil could be declared free of Foot and Mouth Disease (FMD) with vaccination in 2018 and FMD-free without vaccination in 2023, which could expand its ability to export beef and pork to the Pacific market, thus competing directly with the U. S. and Canada in markets such as Japan and South Korea.